

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (withdrawn): An anti-microbial sanitary ware comprising:
a substrate; and
an anti-microbial film formed on said substrate and comprising a protective layer and anti-microbial metal particles that are dispersed in said protective layer;
wherein said protective layer is made from a compound selected from the group consisting of metal nitrides and metal carbides; and
wherein said anti-microbial metal particles are made from a metal selected from the group consisting of silver, zinc, and copper.

Claim 2 (withdrawn): The anti-microbial sanitary ware of claim 1, wherein said compound of said protective layer is metal nitride.

Claim 3 (withdrawn): The anti-microbial sanitary ware of claim 2, wherein said compound is selected from the group consisting of zirconium nitride, chromium nitride, and titanium nitride.

Claim 4 (withdrawn): The anti-microbial sanitary ware of claim 3, wherein said compound is zirconium nitride.

Claim 5 (withdrawn): The anti-microbial sanitary ware of claim 4, wherein said substrate is made from a material selected from the group consisting of copper alloy, zinc alloy, stainless steel, ceramics, and plastics.

Claim 6 (withdrawn): The anti-microbial sanitary ware of claim 5, wherein said substrate

is made from copper alloy.

Claim 7 (original): A method for making an anti-microbial sanitary ware, comprising the steps of:

placing a substrate in a sputtering chamber in a sputter; and

simultaneously sputtering a first metal target of a first metal and a second metal target of a second metal through closed-field unbalanced magnetron sputtering techniques, which form a continuously closed magnetic field around the substrate, so as to react the first metal into a metal compound which is subsequently deposited on the substrate to form a protective layer, and so as to generate metal particles of the second metal that are dispersed in the protective layer;

wherein the second metal is selected from the group consisting of silver, zinc, and copper; and

wherein the metal compound is selected from the group consisting of metal nitrides and metal carbides.

Claim 8 (original): The method of claim 7, wherein the first metal is selected from the group consisting of zirconium, chromium, and titanium.

Claim 9 (original): The method of claim 8, wherein the metal compound is selected from the group consisting of zirconium nitride, chromium nitride, and titanium nitride.

Claim 10 (original): The method of claim 9, wherein the substrate is made from a material selected from the group consisting of copper alloy, zinc alloy, stainless steel, ceramics, and plastics.

Claim 11 (original): The method of claim 10, wherein the sputtering for the first metal target is conducted at a voltage ranging from 20-50V, and a current ranging from 3.5-4.5 A.

Claim 12 (original): The method of claim 11, wherein the sputtering for the second metal target is conducted at a voltage of less than 20V, and a current ranging from 0.3-0.5 A.

Claim 13 (original): The method of claim 12, wherein the sputtering is conducted at a temperature ranging from 80-180.degree. C.

Claim 14 (original): The method of claim 13, wherein the sputtering is conducted at a pressure ranging from 0.1-20 mTorr.

Claim 15 (original): The method of claim 14, wherein the sputtering time ranges from 3-13 minutes.